

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (original): A drive unit including
an electric motor (1),
a drive unit casing (2) accommodating therein the electric motor,
an inverter (3) that controls the electric motor, and
a flow passage (4) of a refrigerant that cools the inverter, the drive unit characterized in that the inverter is mounted on the drive unit casing such that a heat sink (33, 53) united with a substrate of the inverter defines a space (R) on a portion thereof opposed to the drive unit casing,
the space is communicated to the flow passage of the refrigerant,
the heat sink comprises heat-sink side fins (36, 56) extending into the space toward the drive unit casing,
the drive unit casing comprises drive-unit-casing side fins (22) extending into the space toward the heat sink, and
the heat-sink side fins and the drive-unit-casing side fins are apart from each other.
2. (original): The drive unit according to claim 1, wherein the heat-sink side fins and the drive-unit-casing side fins cooperatively generate a common refrigerant flow pattern within the space.

3. (original): The drive unit according to claim 2, wherein one of the heat-sink side fins and the drive-unit-casing side fins comprises rib-shaped fins and the other of them comprises pin-shaped fins.

4. (original): The drive unit according to claim 1 or 2, wherein the heat-sink side fins and the drive-unit-casing side fins cooperatively and substantially cross the space with a minute gap therebetween.

5. (currently amended): The drive unit according to claim 2 ~~or 4~~, wherein the heat-sink side fins and the drive-unit-casing side fins comprise the same fins.

6. (original): The drive unit according to claim 5, wherein both the heat-sink side fins and the drive-unit-casing side fins comprise pin-shaped fins.

7. (new): The drive unit according to claim 2, wherein the heat-sink side fins and the drive-unit-casing side fins comprise the same fins.

8. (new): The drive unit according to claim 7, wherein both the heat-sink side fins and the drive-unit-casing side fins comprise pin-shaped fins.

9. (new): The drive unit according to claim 1, wherein the heat-sink side fins and the drive-unit-casing side fins cooperatively and substantially cross the space with a minute gap therebetween.

10. (new): The drive unit according to claim 9, wherein the heat-sink side fins and the drive-unit-casing side fins comprise the same fins.

11. (new): The drive unit according to claim 10, wherein both the heat-sink side fins and the drive-unit-casing side fins comprise pin-shaped fins.

12. (new): The drive unit according to claim 4, wherein the heat-sink side fins and the drive-unit-casing side fins comprise the same fins.

13. (new): The drive unit according to claim 5, wherein both the heat-sink side fins and the drive-unit-casing side fins comprise pin-shaped fins.